MINUTES
(Approved by the Committee)

Energy, Environment & Technology Committee
9:00 a.m.
Thursday, June 26, 2008
Room 204, Capitol Annex
Boise, Idaho

The meeting was called to order at 9:00 a.m. by **Co-chairman Representative George Eskridge**. Other members present were Co-chairman Senator Curt McKenzie, Senator Mike Jorgenson, Senator Kate Kelly, Senator Elliott Werk, Representative Bert Stevenson, Representative Eric Anderson, and Representative Elaine Smith. Absent and excused were Senator Patti Anne Lodge, Senator Russell Fulcher, Representative Maxine Bell, Representative Bob Nonini, Representative Ken Andrus, and ad hoc members Representative Wendy Jaquet and Representative Mark Snodgrass. Staff members present were Mike Nugent and Juanita Budell.

Others present included Ken Miller, Snake River Alliance; David Hawk, F2A; Ken Baker, Association of Idaho Cities; John J. Williams, Bonneville Power Administration; Liz Woodruff, Snake River Alliance; Russ Westerberg, Rocky Mountain Power; JoAn Condie, Idaho Consumer-Owned Utilities Association; Glen Pond, Rocky Mountain Power; Gary Gould, Shoshone-Bannock Tribal Council; Jeff Burns, Renewable Energy Resources; Mark S. Hiddleston, Renewable Energy Resources; Bryce R. Baker, Renewable Energy Resources; Mike T. Gallup, Renewable Energy Resources; Jim Nowierski, Gallatin Public Affairs; Benjamin Davenport, Evans Keane; Russ Hendricks, Idaho Farm Bureau Federation; Josh Bogle, Green Remodeling; Brenda Tominaga, Idaho Irrigation Pumpers Association, Inc.; Dar Olberding, Idaho Grain Producers Association; Brian Whitlock, INL; Lon Stewart; Gene Fadness, Idaho Public Utilities Commission; Susan Burke, Department of Environmental Quality; Justin Hayes, Idaho Conservation League; Karl Bokenkamp, Rich Hahn and Mark Stokes, Idaho Power; Jim Kempton, Idaho Public Utilities Commission; Barbara Beck, Moffatt Thomas; Joe Weatherby; Stan Boyd, Ridgeline Energy; Claudio Beagarie; and Paul Kjellander, Office of Energy Resources.

Chairman Eskridge called on **Rich Hahn**, representing Idaho Power.

Mr. Hahn introduced two members of Idaho Power, **Karl Bokenkamp and Mark Stokes**, who presented a PowerPoint program on Idaho Power's "Integrated Resource Plan."

Mr. Stokes gave a brief history of the IRP process. In 2006, Idaho Power submitted its IRP to the Public Utilities Commission. The Commission requested that they align their next submission with the other Idaho utilities, making it a three year cycle (June 2009). However, the Commission requested an update in 2008 on the status of the plan and comparisons to the 2006

plan. Committee members were given copies of Idaho Power's "2008 Integrated Resource Plan Update" (Handout #1).

Mr. Stokes said that his presentation would focus on comparisons of the Update to the 2006 IRP.

Following are some of the 2008 IRP Update Highlights:

- Idaho Power expects to add 12,500 to 13,000 new customers annually over the next 20 years. In 2006, the figure was 11,000-12,000.
- Idaho Power's average annual load is forecast to increase 30 average MW per year over the next 20 years.
- Idaho Power's peak-hour demand is forecast to grow 70 MW per year over the next 20 years.
- Recent demand-side management (DSM) program performance has exceeded expectations. Sixty percent of the DSM savings are coming from commercial and industrial customers; 20 percent from residential customers; and 20 percent from irrigation customers.

Under the Public Utility Regulatory Policies Act of 1978 (PURPA), Idaho Power is required to offer independent developers a power purchase contract based on a standard avoided cost rate for any qualifying facility with a monthly output of an average of 10 MW or less. They currently have 94 contracts. Since the '06 IRP, four projects have been canceled and three new ones have been signed up. Overall, the change has been less than a megawatt.

Chairman Eskridge asked how Idaho Power firmed up the wind projects. **Mr. Stokes** replied that they primarily do it with the hydro system in the Hells Canyon complex. They have to hold a certain amount of reserves on hand for that purpose.

Senator Werk inquired if Idaho Power can't firm up the projects, do the owners of the wind turbines pick up the extra cost if Idaho Power has to purchase power from another source? **Mr. Stokes** said that he thought the Senator was referring to wind integration. With the PURPA contracts, there was a wind integration case, and out of that case was a settlement that said new wind contracts that are signed up are to have a deduction that is applied to the cost rate to account for the cost of holding those extra reserves. The prior contracts did not have that provision built into them and Idaho Power was responsible.

Chairman Eskridge asked if larger amounts of generation now have to be held in reserve. **Mr. Stokes** said that as the amount of wind on the system grows, they will have to carry higher amounts of reserves.

Mr. Stokes reported on two transmission projects. Since the 2006 IRP, Idaho Power has joined the Northern Tier Transmission Group (NTTG), which is a regional group that looks at large transmission projects. Their overall goal is to improve the operation and expansion of the high-voltage transmission system that delivers power to consumers in seven western states. One of

the projects is the Hemingway-Boardman line. The Hemingway substation will be near Melba, Idaho with the line running to Boardman, Oregon and is proposed to be on line as early as 2012. The other project is the Gateway West Project. It starts in eastern Wyoming and will join the Hemingway-Boardman Project at the Hemingway substation. The plan is for it to come into service between 2012 and 2014.

In the '06 IRP, there were plans to upgrade the Shoshone Falls Hydro Project in 2010. Given the uncertainty of the water issues in the state, the project is dependent upon a certain amount of water that is available in the river. There is enough uncertainty associated with it that Idaho Power is uncomfortable moving ahead with the project. It has been delayed until 2013. The impact of that delay results in the reduction of about 11 MW annually and 15 MW reduction in July during the peak hour. The other water issue that has a larger impact is the proposed shift in fish water releases by the Bureau of Reclamation. It would take water that is typically released in July and August and move those releases to April, May, and June.

Representative Stevenson inquired about the water shift in July and August and wanted to know if it was all the way up the system? **Mr. Stokes** said the water comes from the Upper Snake in Eastern Idaho and it goes through the system.

With regard to supply-side resources, **Mr. Stokes** said that the Elkhorn Valley Wind Project is a 100 MW project that is located in northeastern Oregon with 61 wind turbines and became operational last Fall. The Danskin Project went commercial this spring and is a peaking unit. The U.S. Geothermal Project is the result of a 2006 request. The Raft River #1 Unit became operational in October, 2006 and the Raft River #3 Unit on the same site and two units at the Neal Hot Springs site, located in Eastern Oregon, will come on-line at a later date. The coal-fired resource that was expected to be on-line in 2013 has been delayed indefinitely because of escalating construction costs. He stated that they have base load needs that they still need to meet.

Chairman Eskridge asked about the base load resource. **Mr. Stokes** said that the way the RFP was structured, it was for a power purchase agreement with someone else to build the plant and to sell the energy to Idaho Power. Another option was for someone to build and operate a plant, and Idaho Power would buy the gas, dispatch the plant and take the energy from it. There was another option, that if any of the proposals were not acceptable, there would be something to fall back on.

Senator Kelly asked if it was natural gas and **Mr. Stokes** said that was the expectation, but it doesn't have to be. When asked what the time frame was, **Mr. Stokes** replied by April, 2012.

Chairman Eskridge commented that the thermal resources had gone from 45 to 51 percent. He said given the problems with developing conventional thermal resources, would we assume it would be gas? **Mr. Stokes** said the figures he is using came out of the '06 IRP and the thermal numbers still include the 2013 Wyoming coal resource. The 2012 base load resource is going out

for the same size. The 250 MW that was planned is part of the 51 percent out of the '06 IRP. **Chairman Eskridge** asked what would replace the coal plant in nine years if it doesn't prove out. **Mr. Stokes** replied that it would be replaced with gas or something else and if the technology is not advancing fast enough, it may get pushed out. The further out in the planning horizon they go, the less certain they are on the resources in the plan.

Idaho Power has started initial work on the 2009 IRP and many of the issues outlined in the update will form the foundation for the 2009 IRP. It will hold the IRP Advisory Council meeting August 7 and is the mechanism to involve the public in their planning process. There are two studies being done that will be incorporated in the 2009 IRP. The first is an in-stream energy feasibility study that takes small turbines and puts them in rivers, canals, and small channels and generates kinetic energy in that channel. They are small units and there is not a lot of potential for a large generation of resource there, but it is something they want to look at because of all the waterways in the state. They have hired a firm to conduct a solar power feasibility study. **Mr. Stokes** said they are collaborating with PacifiCorp and Avista to look at and analyze joint resource development opportunities, with one of them being nuclear. It takes approximately a year to get through the whole planning process and they plan to file their 2009 IRP in June of next year.

Representative Stevenson asked if the Bureau requires the water to be moved earlier in the Spring, what is the cost going to be for the electrical system? **Mr. Stokes** said they have looked at it, but doesn't remember the cost impact.

Representative Stevenson said that Idaho has historically had low-cost power and now that Idaho Power, Avista, and PacifiCorp are moving to other forms of generation and competing in the same market for power, he asked as to what effect this is going to have on Idaho as power is consumed? **Mr. Stokes** said they are seeing prices going up and will continue to go up. Construction costs have escalated in the last two years.

Representative Stevenson said that where he comes from they compare the DSM, particularly on the irrigation demand side, with Rocky Mountain. He stated that some of the people in that area think that Idaho Power's program is not as flexible, nor has the same incentives as Rocky Mountain. **Mr. Stokes** said they had a workshop about two weeks ago discussing that issue and there will be some changes proposed in that program that they will incorporate in the 2009 IRP. The main difference between the two programs is a dispatch ability element.

Mr. Bokenkamp continued the discussion by sharing some of the challenges that Idaho Power faces. One of them is the new, large load. At present, there is a limited amount built into their existing load forecast for these new loads. At present, they have an average of 38 MW with a peak demand of 43 MW. Based on discussion, approximately 250 MW of additional load is possible by mid 2012, which is not built into their plan at this point. He stated that they rely on making a significant amount of purchases from Pacific Northwest in the summer. They do not

always have those purchases lined up in advance. In the existing plan for this update, July, 2011 they are relying on 328 MW of purchases over peak hours.

Other challenges, from the research planning perspective, are technology, fuel and carbon. On the technology side, it will be the technology that is applied to DSM and energy efficiency, so there are opportunities for advances in that area. Carbon capture and sequestration depend on technology, as well as coal gasification. **Mr. Bokenkamp** thinks that research will continue to be pumped into that. As for natural gas, in their near term resource alternatives for projects that they can get built and deploy quickly, natural gas is currently the fuel of choice.

Senator Werk inquired about the impact that plug-in hybrid cars will have on the need for base load. **Mr. Bokenkamp** said that is an issue they have identified and will address. **Senator Werk** also inquired about a program regarding purchasing green energy. **Mr. Bokenkamp** said that the green power program is in place.

Chairman Eskridge asked if the rates would be more expensive for the green power program and would it be reflected in the rates? **Mr. Bokenkamp** said it would.

Representative Stevenson asked if the requests for green power are increasing or, due to the change in economics, is it less? **Mr. Bokenkamp** answered that he didn't have the specifics on that program; however, **Mr. Hahn** said that he would provide the information to the committee.

Senator Kelly wanted to know more about the energy efficiency programs and how they are working. **Mr. Bokenkamp** said that as far as the energy efficiency programs, with their prices low, they are not out as far on the supply curve with DSM programs, so there is more supply available as prices become higher. **Mr. Stokes** said that they are looking at expanding existing programs and new programs. A result of that study will let them compare all those programs against the supply side and resource options that are out there. They plan on a twenty-year horizon every two years, so the programs are refreshed on a fairly frequent basis. **Chairman Eskridge** said that when Idaho Power does its planning, they have to take into account the uncertainty of every resource. They also have an obligation to the ratepayers. The planning ability is more risky today than it was twenty years ago and he asked if Idaho Power can meet the load required? He also feels it is an economic risk to the state. **Mr. Stokes** replied that he feels good about their ability to plan and to serve the load. As a result of some of the changes, they have a few years where their projections will be deficient during peak hours. At the present time, there is not a lot of extra built into their plan.

Chairman Eskridge inquired if any large loads had been lost because of the uncertainty of the power supply in Idaho. **Mr. Bokenkamp** said not that much.

That concluded Idaho Power's presentation. The **Chairman** then called on **Jim Kempton**, Commissioner for the Idaho Public Utilities Commission.

Mr. Kempton provided the committee with a 17 page "IDAHO PUC TOPIC LIST" (Handout #2).

Starting with the 2007 Energy Plan, there were 14 items in that Plan. That Plan was developed before the Governor's executive order to establish the Office of Energy Resources (OER). Now, there is a mix in the existing plan that needs to be divided out between the PUC and the Office of Energy Resources. **Mr. Kempton** said these are not "black and white" areas; they are areas where they can work efficiently together, it's just that they need to know where they are in terms of the policy side and the regulatory responsibilities. He said that he is happy to report that as a part of the structure that **Paul Kjellander** has set up, they can do the coordination process.

Mr. Kempton said that the ratepayers will be experiencing rate shock in no uncertain terms. There are a lot of costs built into the system that are moving downhill. The major issues are centered around finding the cost of service with responsibilities of different classes of customers, such as irrigators, large loads, commercial, and residential. He said there is a back-load that is starting to build because of running out of hydro. **Mr. Kempton** said that one of the reasons to not add a renewable resource portfolio, under statute, is a bad idea. The OER has a task force that has identified the areas in the portfolio standards.

With regard to the rate change, some of the issues were about the irrigation costs compared to the residential costs. Irrigators say that residential growth is killing them and the rates keep going up. On the residential side, they say they haven't added anything and their rates have increased. These are the kinds of issues that have to be addressed in '09 and **Mr. Kempton** feels it will be a tough area to handle. Some people will be very unsatisfied with the rates.

The PUC had four other filings associated with Idaho Power. They were the Power Cost Adjustment, Danskin Power Plant, Fixed Cost Adjustment for purpose of "Decoupling," and the Energy Efficiency (DSM) Rider (pages 1-3 of handout).

The Power Cost Adjustment is applied when forecasts are missed or for other reasons that require additional costs to the system. The company spent approximately $163 million for unanticipated costs. The impact of the PCA was mitigated slightly by a Commission decision to apply about $16.5 million in revenue the company earned from its sale of surplus sulfur dioxide (SO_2) emission credits toward reducing the PCA. Without the SO_2 emission credit, the average PCA rate increase would have been approximately 12.8 percent. With the SO_2 credit, the average increase rate was 10.7 percent. The associated residential customer rate increase was 8.45 percent.

The PUC approved an increase to Idaho Power's base rates of 1.37 percent ($63.4 million) for the new Danskin natural gas plant near Mountain Home. It is a 170 MW natural gas plant, with plant construction costs totaling $56.7 million and transmission and interconnection upgrades totaling $7.54 million.

Last year, the PUC authorized a three-year pilot program called the Fixed Cost Adjustment (FCA) for the purpose of "Decoupling." This is to encourage utility investment in conservation and to promote energy efficiency among its customers. During 2007, the company claimed it over-collected $3.5 million from residential customers (because they used more power than estimated) and under-collected $1.2 million from small-commercial customers (because they had been more conservative). The result of that was that small-commercial customers had a surcharge placed on them to match the value they should have contributed and the residential customers received a credit on their rate. By using the decoupling method, a lot can be done in the conservation and renewable resource areas.

The fourth filing, the Energy Efficiency (DSM) Rider, was addressed next. During 2007, Idaho Power was able to reduce consumption by 91,145 MW through energy efficiency programs. Through the use of load control devices installed on customer meters, Idaho Power can reduce the amount of power it needs during peak periods when electricity is most expensive. The programs include cash incentives and information and services that aid in the construction of energy-efficient buildings and installation of energy-efficient appliances. The Commission's final order for this case increases the energy efficiency rider from 1.5 percent of base revenue to 2.5 percent. The Commission approved the rider increase because the company saves more in energy costs than it spends on the programs, benefiting all customers.

Mr. Kempton then referred to page 11 of the handout, regarding the sale of 35,000 SO_2 allowances by Idaho Power in 2007 for $19.6 million (less brokerage fees). The company proposed using $500,000 to develop classroom education programs about energy efficiency, with the remaining balance directed toward other energy efficiency operations. The Commission did agree to set aside that amount to be directed toward energy education as proposed by the Idaho Energy Education Project.

Mr. Kempton read the testimony of **Michael W. Masters** that he presented before the Committee on Homeland Security and Governmental Affairs to the United States Senate on May 20, 2008 (page 1A & 1B of the handout). **Mr. Kempton** said that perhaps the Idaho House and Senate might want to do a Joint Memorial to Congress regarding this issue (commodities futures market). The parties, which **Mr. Masters** calls Index Speculators, allocate a portion of their portfolios to "investments" in the commodities futures market and it behaves very differently from the traditional speculators that have always existed in the marketplace. The Index Speculators have stockpiled 1.1 billion barrels of petroleum and over 2 billion bushels of corn futures. One troubling aspect of Index Speculators demand is that it actually increases the more prices increase. **Mr. Kempton** said that it is not a good thing that is happening and it is happening now with natural gas. He thinks the Legislature should keep a handle on this and also address it with our Congressional delegation. Another issue is regarding the effect of increasing power rates for low-income people. He said the Legislature is obligated to look at programs and make recommendations so that a mechanism can be put into place to help low-income people with the rising costs of utilities.

Senator McKenzie inquired if the committee wanted to take some action regarding a resolution for our Congressional delegation to look into the investments of the commodities futures market. **Senator Werk** agreed that it should be done. Other committee members also concurred. **Chairman Eskridge** asked **Mike Nugent**, staff member of the Legislative Services Office, to prepare a draft to present at the next committee meeting. **Mr. Nugent** said that he would and it should be in the form of a Memorial. **Chairman Eskridge** suggested that **Mr. Kempton** help, if it is needed.

Senator Kelly inquired of **Mr. Kempton** if he had specific suggestions that she could relay to the Legislature regarding help for utilities for low-income people. **Mr. Kempton** said that he didn't have any recommendations because there needs to be a review of what the programs are. He said they will open a docket on tiered rates that will encourage public and governmental participation in framing how this provision of the Idaho Energy Plan can be fairly, justly and reasonably implemented.

Senator Werk inquired about natural gas demand side management. **Mr. Kempton** said they are working with some DSM programs with gas but haven't gone as far as the electrical side has.

The next speaker was **Paul Kjellander** with the Office of Energy Resources.

Mr. Kjellander said that he has been asked to serve on the next Resource Planning Council that is being put together. He formerly served with the PUC and was pleased to see **Mr. Kempton** here at this meeting and he thanked him for the work that he is doing on behalf of the citizens of Idaho.

He said that the Office of Energy Resources is now officially eight months old and that it has been an interesting eight months. He noted that there are some positive and good things to talk about, but first and foremost, he said there was a need to talk about the administration side of OER. To help put things into perspective, they spent a few months trying to resolve all of the transition issues as they moved from the Department of Water Resources within the Energy Division to become the stand alone Office of Energy Resources. With a lot of helping hands, they made the transition as seamlessly and flawlessly as possible. As they move forward with many projects, one of them is the Governor's 25x25 Council which has taken good shape. They have restructured the Council and he is pleased with the progress.

Senator Kelly asked for a list of Council members and Board members. **Mr. Kjellander** said he would get it for her. When the website is up and running, it will be available there also.

Chairman Eskridge asked for clarification of the Governor's 25x25 Council. **Mr. Kjellander** said it references that by the year 2025, it is the intent for the state of Idaho to be able to utilize 25 percent of its power through renewable resources generated within the borders of the state.

Senator Jorgenson said that it is disconcerting to him that we have limited resources and there is not much that we can do about it. He then asked **Mr. Kjellander** what his fears or concerns were, then also wanted to know what his greatest expectations are. **Mr. Kjellander** said that he feels the number one concern is energy efficiency. If it is not achieved at certain levels more aggressively and cost-effectively, then we could be in trouble. Energy efficiency is not free, it does cost money. You also have to ensure that you leave the utilities whole at the end of the day. If what you've done is to force them into energy efficiency that cuts off revenue streams, then they have been impacted significantly. He said they need to be mindful of the fact that there will be capital expenses and what they don't want to do is to make major mistakes that cost them more in making the projects a reality. He stated that this is a piece of a very complex puzzle. Transmission is another area, as nothing can be done without it. The present transmission system is at or near capacity. There are seven transmission line projects that have been announced publically that will intersect throughout Idaho as they are built. Generation includes all things and is critical to all things which need to be pursued simultaneously.

Mr. Kjellander said that it is time that we rethink things in a new way, such as coal. The coal resources are still being sold and they are being sold and used in China and Europe. There needs to be a stepped up effort in coal research. He feels the Idaho National Laboratory could help contribute to some of that discussion.

Mr. Kjellander said there are some good things happening. He is excited about the 25x25 Council and how it will evolve. Also, they have looked at some new revenue streams that they hadn't seen before. They got a grant for a specific pilot project that will work with the Boise Metro Chamber in partnership with Idaho Power. With regard to low-income needs, they feel that more has to be provided than just a one-time payment on heating bills. He suggested targeting multi-family, low-income housing units with energy efficient programs and bringing them up to star levels or higher resulting in a one-time expense, but having a never-ending rollover reciprocal value, regardless of the tenant. **Mr. Kjellander** said does it take legislation or something that already exists out there and just doing it? The Commission also saw a need for some energy education and they are working with the utilities and the Department of Education on a specific issue. They expect to move forward in July. In the area of transmission, it is a key issue. People understand the need for the lines, but they don't want it in "their backyard." At $1.62 million dollars per mile for high capacity transmission lines, means ratepayers will be paying that additional cost. He said his office is working with the BLM and the Governor's Office to create a cooperative agency status so that all state agencies are working in tandem so that the process can move forward and not get bogged down.

At the state level, there are soda machines in the state buildings. Seven to nine of those machines will consume the same amount of electricity of one 2,000 square foot home. So anything done to reduce the power consumption of those machines benefits everyone. Through Idaho Power, devices will be installed on all the machines to save at least one-third of the power that is consumed each day. The savings will be between $16,000 and $20,000 annually. This is an example of how simple the solutions are. In closing, **Mr. Kjellander** said that it is a series of

small steps, not one big step, that add up. With the 25x25 Council, with so many people involved, if each person takes one small step forward, a lot will be accomplished collectively.

Representative Stevenson asked if any of the money that was put into the ethanol renewable energy program is still available? **Mr. Kjellander** said there is still some money left in the pool. Some money was put in by the Legislature two sessions ago to help spark more activity at the fuel stations to make sure ethanol was available. There have been many applicants that have come in and he thinks the program has been successful, and that the money was spent with the intent that was behind it.

Representative Stevenson said that there has been some interest in using methane to make natural gas. He asked if there was anything being done to allow vehicles to be converted to natural gas? **Mr. Kjellander** said that one of the tasks the 25x25 Council on bio gas is looking at is the production of methane and what some of the other markets are.

Senator McKenzie said that he likes the philosophy of getting things done without legislative involvement, but at some point, the state might want to promote energy efficiency. He asked if there are proposals coming out of the 25x25 Council? **Mr. Kjellander** said that the Council is not a substitute for the Legislature. He views it as an opportunity for creativity, the focus being to find the mechanism to get the job done.

Representative Anderson said part of the creativity that the Legislature provided was House Bill 500 which dealt with the renewable energy projects on school endowment lands. It was followed by House Concurrent Resolution 54. He said that he is curious about the 2.5 million acres that could be utilized for the benefit of the schools and inquired if **Mr. Kjellander** has had an opportunity to explore the issue. **Mr. Kjellander** said it has sparked some communication channels with his office and the Department of Lands. It has also allowed them to look at transmission lines going across state lands, putting them in the best location, to better maximize the use of the land. They also have a project with a company called SEP, which is looking at a large-scale wind project, and they have a contract signed with a company out of Nevada for delivery. Their project includes federal, state, and private lands. This will give them the opportunity to exercise the 49 year lease agreement that the Legislature passed two years ago. He said it also dovetails well with the legislation that was passed this last year.

Chairman Eskridge inquired if the state was marketing the land to developers. **Mr. Kjellander** said the legislation was a marketing tool in and of itself. One of the groups the Governor's Office has asked **Mr. Kjellander** to be a part of is through the Western Governors' Association. It is called the Western Renewable Energy Zone. They are looking at creative avenues and methods to try to get transmission to some of those currently stranded renewable resources, regardless of where they are - federal land, state land or private land. They have done some mapping on lands within the borders of the state of Idaho and there needs to be more research in terms of what resources are actually there. There are some "hot spots," but the question is - how far away are they from transmission? The cost is $1.6 to $2.6 million dollars per mile.

Senator Kelly said that she has heard that the energy plan is being rewritten and inquired if that was true. **Mr. Kjellander's** answer was "no." He said that he is writing an action plan for the Office of Energy Resources. He suggested that when committee members have questions such as the one asked, he would like for them to call him. **Senator Kelly** then asked when would the action plan be ready for review. **Mr. Kjellander** said the first person to see it would be the **Governor**. **Senator Kelly** then asked if he was working on any initiatives, resolutions, or legislation that would be brought before the Legislature. **Mr. Kjellander** said that he didn't want to give expectations to the committee about things he is working on, adding that he will share comments when the time is right.

Chairman Eskridge asked if the energy legislative plan is a workable document? The answer was "yes." **The Chairman** then asked if there was anything in the Energy Plan that would give **Mr. Kjellander's** office a roadblock. **Mr. Kjellander** said that he doesn't see any barriers and will be forthright in bringing it to the committee's attention.

Chairman Eskridge said that we are producing and shipping coal out of the country which ultimately will be detrimental to our interests in conjunction with what we could be doing here. He asked how the issue can be brought to the attention of the people so that they are more aware of not using our own resources within our own boundaries. **Mr. Kjellander** said we need to ask ourselves what steps do we need to take to advance the issues associated with clean coal technology? He also asked what incentives need to occur at the federal level to move things forward and bring investment dollars back into that technology? He thinks the message is slowly trickling out and people are beginning to understand it. He said we need to find a way to bring investments back into the mix. No single one base load resource, at that scale and magnitude, will likely be belonging to one jurisdiction. He said that they need to work with Public Utility Commissions from the states that may be involved in a specific joint venture to talk about some type of certainty, tied to regulatory treatment for facilities like that, so that it doesn't scare investments away.

The final speaker for the morning's program was **Mark Hiddleston**, Renewable Energy Resources. A copy of his testimony is inserted into the minutes. He also provided a handout, "Renewable Energy Incentives for Idaho" (Handout #3). **Mr. Hiddleston** stated that by way of brief introduction, Renewable Energy Resources is a small, local company that designs, builds and integrates renewable energy solutions for homeowners, small to mid-size businesses, and agricultural customers.

Mr. Hiddleston commended the committee for its work in producing the 2007 Idaho Energy Plan. He said he was here today, to ask for the committee's help in implementing recommendations from this plan, specifically as they pertain to renewable energy technologies, and ensuring renewable energy is available to a broader spectrum of Idahoans, and not just the individuals at the upper end of the income scale, as is the case today.

Mr. Hiddleston said that renewable energy technology is sound, mature, and has been proven over time; however, most Idahoans today find investing in renewable energy prohibitive because of the relatively high initial investment required to install the equipment. Around the world and within the U.S., civic leaders have recognized the immediate and future benefits of renewable energy and they have also recognized the challenges to implementing these technologies. They are responding with creative and successful solutions to help their citizens secure their energy future.

Mr. Hiddleston said that we are blessed to live in Idaho, where energy costs have historically been low. But energy costs across the board in Idaho are rising, and steps need to be taken now to ensure that energy costs in Idaho remain affordable into the future. A short five years ago, in 2003, he said that if he had been asked to invest $20,000 in a machine to produce gasoline, he might have responded, "No—gas is only $1.43 per gallon, why would I need a machine like that? The payback would never justify it." He said that to fast forward five years, we see gasoline costing $4.05 per gallon. He said if someone asked him if he wished he had made that investment five years ago, his answer would surely be much different, adding that it is not difficult to imagine a similar situation occurring with other forms of energy.

He said that the U.S. and other countries, that are showing leadership in shaping their own energy future, are being successful through partnerships between civic leaders, utility providers and the consumers themselves. **Mr. Hiddleston** shared with the committee a sample cross-section of the types of people contacting them daily, who are Idahoans willing to invest in their energy future today, but can't quite overcome the entire initial financial requirements to install these systems.

Harold from Jerome is a farmer and a UPS truck driver. He drives the truck to supplement the income from the farm. He currently spends $25,000 a year on electricity for irrigation He wants to invest in a wind turbine & a small hydro turbine to offset some of these costs.

Dawn & Derek live in Mountain Home. Derek is active-duty military. Derek recently emailed me from his deployment location in the Middle East and asked about wind power for his home. He returns to Idaho in August and wants a small wind turbine in his yard.

John in Council is retired. He and his wife built their dream retirement home 4-5 years ago. He is currently heating with propane which is draining their resources much quicker than anticipated. They want to swap out their propane furnace for a geo-exchange system as well as install some solar PV in a small clearing next to their home to offset electric costs.

Tara lives in Horseshoe Bend and is a nurse. She called us this past winter in a "heating crisis." Propane and wood pellets were costing her about $400 per month to heat her 2,000 square foot home. She is on a fixed salary and could not afford her heating. She wanted to install a geo-exchange system to reduce her heating costs by more than $300 per month.

The renewable energy industry has seen tremendous growth in the last five to ten years or so. Industry continues to make improvements, but most of the renewable energy technologies today are essentially the same tried and tested ones known for decades.

Solar power is probably the best known of the renewable energy production technologies, and one of the easier technologies to implement. Idaho's solar resource is also abundant. When a home or business with a solar array is authorized by the local utility through a net-metering program, any excess energy that is produced by the array can be sold back to the utility at a standard rate. One major benefit of this type of system is that during peak energy use during the summer air conditioning season, solar panels are producing at their peak—directly offsetting some or all of the energy used to cool our buildings.

Wind power is also becoming much more prevalent. It is a relatively simple process to turn the mechanical energy of wind into electricity through a turbine. Much of the attention has been focused on large commercial or utility scale wind developments, but residential and small-commercial sized wind turbines are also manufactured that are quiet, unobtrusive, and compatible with the utility grid in the same way as solar. Agricultural power users of all sizes have shown keen interest in investing in wind power. Their rural locations, and oftentimes high electrical usage for operating irrigation pumps make small to medium sized turbines a natural fit.

Solar water heating is a popular and an effective method to use the sun's heat to provide hot water for all of our domestic uses. Panels are mounted on the roof in a similar way to solar electric panels, but instead of producing electricity, water is piped through the panels, which heat the water much like the sun heats the interior of your car on a summer day. These systems cost less to manufacture and install than the electric panels, but they are limited to producing hot water.

Since one of the top priorities of the Idaho Energy Plan is conservation and efficiency, and since 40-60% of the energy use in a typical building is used to heat and cool it, it is appropriate that we to speak of a technology that has been available since the 40's, but is vastly under-utilized. Primarily this is because it is not as widely known as some of the other technologies we have discussed. It can heat and cool buildings between 40% and 70% less than any other method available. **Mr. Hiddleston** said he was speaking of ground-source heat-pumps, or Geo-exchange.

Geo-exchange uses heat energy stored in the earth itself—put there by the sun, as it shines on the earth's surface. Since the sun replaces this energy constantly, Geo-exchange is a renewable technology. The sun warms the earth's surface, and the earth retains this heat. Even though it may be very hot or cold outside, if you go underground, the earth remains a relatively constant temperature of about 50-55F. This is the energy that we are tapping into with Geo-exchange, not to be confused with the heat from volcanic activity, which is geo-thermal heat. **Mr. Hiddleston** said that the key to Geo-exchange is the ground-loop. A network of plastic piping is buried underground, about 7-8 feet deep. A solution of water and anti-freeze is then circulated through

that loop. Since the ground is warmer than the solution, the solution gets warmed as it travels through the piping. This solution is then brought into a specialized heat-pump, which concentrates the heat-energy and delivers it into the building via forced air, or through water-based radiant heat. During the summer the process is reversed, and heat is removed from inside the building, and rejected into the ground via the same ground-loop piping. **Mr. Hiddleston** said that all of these renewable technologies are currently in use successfully throughout Idaho. The Idaho Energy Plan recognizes that adoption of these technologies in Idaho is lagging behind other states in our region. These other states are succeeding in implementing these systems in great measure as a result of critical incentives and programs that help breach the barrier of initial investment.

Mr. Hiddleston highlighted a few western neighbors who are leading the charge with renewable energy implementation, and how they are accomplishing it.

Solar Power
A typical small residential solar electric system of 2kw in size costing $20,000 to install, after the federal, state, and utility incentives would end up costing an Idaho homeowner about $16,400. In Utah, it would cost the homeowner about $12,440. In Oregon, it would cost the homeowner $7,500 (or less than half of the cost to the Idaho resident).

Wind Power (small)
A typical small residential wind turbine of 2kW in size costing $17,000 to install, after the federal, state, and utility incentives, would end up costing an Idaho homeowner about $15,400. In California, it would cost the homeowner about $12,250. In Oregon, it would cost the homeowner $3,400 (or less than 1/4th of the cost to the Idaho resident).

Geo-exchange
Costs vary widely depending on new construction or retrofit. A typical residential installation in a 2,000 square foot home will cost around $22,500. There is no federal incentive today. Idaho includes this technology in its Residential Alternative Energy Tax Deduction (Title 63), and utility rebates vary from $0 to $3,000 depending on the region within the state. However, for the majority of residents of Idaho, there is little in the way of incentives. **Mr. Hiddleston** believes this to be one of the greatest areas of opportunity for the state.

One of the most successful states, in **Mr. Hiddleston's** opinion, is Oregon. Their tax credit program for residential (RETC), and business (BETC), combined with the Energy Trust of Oregon rebates (the result of the 1999 Energy Restructuring Law) has resulted in significant benefits to the state overall, in addition to propagating implementations of these energy technologies.

These benefits were reported by an independent economics firm last year and show a net positive effect on the state in 2006 including:

- Output in Oregon's economy increased by $142.7 million
- 1,240 new jobs were created
- Oregon wages increased by $18.6 million
- Tax revenues for state and local government increased by $10 million
- Oregon commercial and residential energy costs decreased by $48 million

Mr. Hiddleston said that according to the 2007 Idaho Energy Plan, conservation of energy is a priority for the state of Idaho. Since the utilization of Geo-exchange presents one of the largest areas of untapped opportunity to conserve energy, he asked that this committee review and implement programs or incentives to encourage its use as much as possible. He also asked the committee to expand its recommendation to exempt energy efficient technologies from sales and use tax, to include energy producing technologies in the exemption as well, regardless of the size of production capacity.

Mr. Hiddleston asked the committee to review and broaden its existing Residential Alternative Energy Tax Deduction and/or revise it based on successful models in other states pertaining to residential, commercial, and agricultural incentives. These incentives and programs need not be permanent, but rather a short to medium term transition period to raise awareness and help people make the commitment to invest in renewable energy. Lastly, he said that Renewable Energy Resources would also like to offer time and resources to assist the committee in any way they can, to further study, evaluate, and recommend policy changes to benefit the people of Idaho, and help ensure that Idaho's energy needs are met for many years to come.

Senator McKenzie asked about Oregon's rebate program for the energy trust. **Mr. Hiddleston** deferred the question to **David Hawk**. **Mr. Hawk** said that it is a three percent tax on the energy consumption, both natural gas and electricity, that goes to the Oregon Energy Trust, and from there the money is parceled out to legitimate conservation and efficiency programs in the industrial, residential, and commercial sectors. They had fair amount of success with the program, but they have also run out of money. They went back to the Legislature to raise an additional two percent and that was denied. **Senator McKenzie** asked what the projection of the costs of tax credits were. **Mr. Hawk** said that was a moving target. He belongs to an industrial group that follows it from the standpoint of their desire to raise additional revenue. There are some issues with it, but it has been modestly successful.

Senator Kelly said that the gentlemen from RER have identified some specific things that could be changed, based on their interface with customers. She said that she is interested in working on these issues and invited any committee member to participate in it with her. **Senator Jorgenson** volunteered. **Chairman Eskridge** thanked them for their interest and asked that they bring their suggestions and recommendations to the next committee meeting.

Senator Werk asked **Mr. Hiddleston** if he would advocate for solar energy credits and incentives associated with residential installation rather than commercial? **Mr. Hiddleston** said that he would not like to have to pick between the two, but what they are seeing in residential is

that the interest level is much higher. The biggest impact, however, on total energy savings would be the commercial side.

The first speaker of the afternoon was **Russ Westerberg**, representing Rocky Mountain Power. He said that he would address their Integrated Resource Plan, then **Glen Pond**, also representing Rocky Mountain Power, would talk about their transmission lines.

Mr. Westerberg provided handouts to the committee (Handout #4). They were "Who We Are, Where We Serve, What We Do," a chart of "Projected PacifiCorp Resource Energy Mix," "Blue Sky Quick Facts for Idaho," and a preliminary corridor map and study area for the "Gateway West Transmission Line Project."

He reviewed some facts regarding their customers and service area. They are as follows:

Service area	136,000 square miles
Transmission lines	15,622 miles
Overhead distribution lines	43,850 miles
Underground distribution lines	14,510 miles
Substations	900
Customers served	1,668,375

Customer Profile:

Residential	1,428,000	85.6%
Commercial	202,000	7.7%
Industrial & Irrigation	34,000	2.0%
Other	4,000	.3%

The company has three units: Rocky Mountain Power serves Utah, Wyoming and Idaho; Pacific Power serves Oregon, Washington, and California.; and PacifiCorp Energy is in charge of the generation fleet. Their current mix of generation is:

Thermal	70.6%
Purchase/contract	22.5%
Hydro	6.7%
Wind	.2%

The company-owned net generation capacity is 9,140 megawatts, at 68 generating plants. They are also heavily into coal. **Mr. Westerberg** then referred to the pie charts of the "Projected PacifiCorp Resource Energy Mix." It showed that coal is about 65 percent of their generation capability. Their prediction for 2016 is that coal will be about 43.4 percent of their generation capability.

Mr. Westerberg next referred to the pamphlet, "Blue Sky Quick Facts for Idaho." Their renewable energy program offers customers a way to purchase even more of their energy from renewable energy sources - such as wind, solar, biomass, low-impact hydro and geothermal resources. They have one of the Top 10 utility renewable energy programs offered across the country. In 2006, they ranked #2 in customer participation and #4 in renewable energy sales.

Mr Glen Pond, who works in eastern Idaho, talked about transmission. **Mr. Pond** said the company had recently made the commitment to invest $4.1 billion into transmission in their system. One of the pieces currently being worked on is in Oneida County. It is a line that will run from the existing Ben Lomond substation in Box Elder County, Utah to the Populus substation to be built near Downey, Idaho. A need for the line has been there for several years. When meetings were held to discuss the project, about 10 people attended in Montpelier and 16 attended in Pocatello. He believes that Utah is facing a greater challenge than what Idaho is facing. In Utah, the cities and counties have banded together to try to stop Rocky Mountain Power from building the line. This line will help to prevent blackouts and brownouts in the future for those people. He said that he would like for more people to turn out for the meetings so that they might better understand the need for the lines and to see the routes the lines will follow.

Representative Smith said that a resident in Downey contacted all the legislators in Bannock County by letter. She stated that when they met with Idaho Power in April, they shared the letter, which indicated the author would be a neighbor of the substation. **Representative Smith** asked if the problem has been resolved. **Mr. Pond** responded by saying that in the resident's mind that it probably had not been resolved. He said that they have a zoning permit from Bannock County for the Populus substation, which is part of the Gateway Project. The property has been purchased and a notice has been posted that there will be a meeting at the Malad High School on July 10 from 6 p.m. to 8 p.m. Notices will also be printed in the local newspapers. **Representative Smith** said that she would contact the other legislators. She also thanked **Mr. Pond** for the previous one-page ad and other communications in the newspapers.

Chairman Eskridge inquired further about the landowner's concerns. **Mr. Pond** said that when they met with a group of citizens from Downey, two positive comments were made by people who live adjacent to the substation property, and one adjacent landowner was very negative about it. **Chairman Eskridge** asked if Rocky Mountain Power has eminent domain rights and **Mr. Pond** responded that they do. He said that they try to be very fair when they negotiate with the landowners.

Representative Stevenson asked if they were far enough along on the Gateway Project that the route had been set or was it somewhat flexible? He is interested in where the lines will go in Minidoka County. **Mr. Pond** referred his remarks to the proposed routes that are on the maps in the handout "Populus to Ben Lomond," the 345kV transmission line project. The preferred planning corridor is on both sides of Minidoka County and on the south side of the river, several miles long.

Chairman Eskridge asked **Mr. Westerberg** whether he is to assume from the IRP, that with the drop of coal from 51 percent to 43 percent, has the company given up on coal generation or waiting for the carbon issue to be solved, or where are they at? **Mr. Westerberg** said that the investment community, right now, is leery of coal and is waiting to learn what the policymakers

are going to do about people burning coal. Once some public policy direction becomes clear, he said that you will see companies making decisions that could move them further into coal.

Chairman Eskridge inquired whether other utility customers could use the transmission lines coming from Oregon or will it be for Idaho Power's sole use? **Mr. Hahn** replied that it is not a joint project, but an Idaho Power project. However, they would have to make use available under the open access tariffs.

Next to speak was **Susan Burke**, Idaho National Laboratory (INL) coordinator with the Department of Environmental Quality (DEQ) Oversight Program. She said that she will address the issue of nuclear waste in Idaho. **Ms. Burke** said that the Nuclear Waste Policy Act of 1982 requires the federal government to provide a permanent disposal for all spent nuclear fuel. This pertains to commercial nuclear fuel as well. The Act requires that the owners and operators of the nuclear power reactor provide the primary responsibility for interim storage of that fuel until a final repository is in effect. A tax was placed on the power from these commercial facilities and that money goes into the nuclear waste fund. That fund is to provide for the repository for the spent nuclear fuel. In 2002, Congress determined that Yucca Mountain, Nevada would become the approved location to develop a repository. Originally, a repository was supposed to be in place in 1998. The current status of Yucca Mountain is that an application was submitted by the Department of Energy (DOE), this month, to the Nuclear Regulatory Commission (NRC) to obtain a license to operate Yucca Mountain. The NRC now has 90 days to determine if the application is complete, and if complete, then to go ahead and docket that application for the full process of determining whether a license would be provided. That could take anywhere from three to four years. The latest projection of when Yucca Mountain could possibly open is somewhere between 2017 to 2021, if it goes through. In Idaho, there was a settlement agreement with the DOE and the Navy. That agreement requires that all the spent nuclear fuel be removed from the INL by 2035.

Right now, the General Accounting Office is charged with looking at a study of the cost of funding Yucca Mountain (if it goes completely forward) versus the cost of not opening Yucca Mountain. One of the unique costs of the settlement agreement in Idaho, that required the fuel to be removed by 2035, has a $60,000 a day penalty for each day the deadline is missed. **Ms. Burke** commented that as far as any type of a nuclear facility that would come to Idaho, the primary licensing authority for such facilities is the NRC. There could be a number of permits that would be needed for such a facility to come through - air permits, wastewater, drinking water, those types of issues. As those applications are made to DEQ, they would process them in their regular course of business. But the primary licensing facility is the NRC, then counties, as far as sites for those facilities.

Senator Werk asked if the waste that is covered under the settlement agreement is limited to the waste that is associated with INL or does it include any nuclear waste within the borders of Idaho? **Ms. Burke** said that it is just the waste from INL, DOE, and the Navy program that the agreement covers. **Senator Werk** then asked about the Idaho Energy Complex, saying their

waste would be negligible since they would be reprocessing their waste, and inquired where the nuclear fuel reprocessing in the United States stands at this point. **Ms. Burke** said that there is no national reprocessing right now with nuclear spent fuel. It was halted in the early '90's. That is part of the national debate - does the nuclear fuel go into a permanent repository and stay there forever or does it go into a holding area, then reprocessed later? **Senator Werk** asked why the reprocessing was shut down and was it because of substantial contamination with the reprocessing? **Ms. Burke** said that she couldn't answer why the nation determined that we would not do reprocessing anymore. The reprocessing that did take place at INL created a different kind of waste and that is what they are talking about when they refer to the high level waste in their tank farms. That waste is being solidified now, as the settlement agreement required. However, it will need to be removed by 2035. **Senator Werk** inquired if it is prohibitive to reprocess spent fuel. **Ms. Burke** replied that it is. She said that some of it may have to do with national security issues with some of the byproducts of reprocessing. **Senator Werk** then inquired if there is any way to know if reprocessing will ever be in effect again. **Ms. Burke** said she didn't know.

Senator Werk then asked **Ms. Burke** if she was aware of a new generation of nuclear power plants that are off the drawing boards and ready to be installed. **Ms. Burke** said that is another process that they are looking at nationally, of exploring a different way to generate power out of this plant. She stated that none are in operation as yet.

Representative Smith said that she understood that France was the only country that is doing reprocessing and inquired if there were others. **Ms. Burke** said she was not sure.

The Chairman thanked **Ms. Burke** for her presentation. He then announced that the next speaker, **Don Gillespie**, Alternate Energy Holdings, had to leave but will email his report to **Mike Nugent,** who will make the report available to the committee members.

Chairman Eskridge asked **Joe Weatherby** to share some information regarding Owyhee County's concerns. **Mr. Weatherby** said that he was on the Zoning and Planning Committee in Owyhee County and also attended meetings in Elmore County. One of the problems they had in Owyhee County was getting accurate information on what was actually being proposed. The application that was submitted was a partial application, with the plans changed again. At that point, they said the power would be 1.7 cents per kilowatt to the ranchers. A program was held in December, 2007 and what they heard from two of the speakers was that 1.7 cents was not even in the ballpark. Another speaker, **Ralph Bennett**, said it would more likely be 6 to 7 cents per kilowatt. Another speaker placed the cost at 8 to 11 cents, plus transmission distribution, which moved it to 11 to13 cents. A more recent study done by Porter Power and Light put the cost at 30 cents per kilowatt. **Mr. Weatherby** said the problem in Owyhee County with the proposal is the huge difference in what is being presented at 1.7 cents and what appears to be the likely cost of nuclear power. The other issue is water. The plant would be in the neighborhood of a 1,600 megawatt plant and use 80 cubic feet per second. He said the proposals that he has seen at the two meetings in Elmore County, AEHI said it would be 100,000 gallons of water per day.

However, he understands that this is not possible. Another thing that was said in Owyhee County was that it would be a dry reactor. There is only one dry reactor for nuclear power in the world and it is a 38 megawatt plant in Siberia. **Mr. Weatherby** said that Owyhee County's concern is - what is the real proposal? The application for towers in Owyhee County was turned down because of the lack of providing ownership. However, the towers were built anyway. He said these are some of the big issues facing them.

The next speaker was **Rich Rayhill**, Ridgeline Energy, discussing wind energy. He presented a PowerPoint program. Following are some of his remarks as he showed the slides:

The leading state in wind energy is Texas, with Oregon second, and Washington third. In 1999, Texas had 100 megawatts. Now they have 6,000 which is mostly in west Texas. With the new wind power, they are creating jobs at a rate of 93 new jobs for every 100 megawatts.

In Umatilla, Oregon, there was a 37 megawatt project started and now it is 400 megawatts. They are experiencing that once you build wind farms, there needs to be people to work them. Presently, there are two colleges in Oregon that are providing degrees in wind energy.

The options for energy is narrowing. Hydro is a tough option and coal is in doubt. Fifty-seven new coal plants were cancelled in 2007. With the carbon uncertainty, it is a big gamble. One of the things they are seeing, no matter what it is - power, gas, or coal - the construction costs are going up.

Wall Street is on board with the global warming issue and the carbon issue and the dollars are going to renewables. The Audubon Society, the Sierra Club, and the Nature Conservancy are all calling for 20-25 times the increase in present wind energy generation globally by 2050 and if it is done by 2030, the benefits double.

Mr. Rayhill said that he is on Secretary of the Interior Kempthorne's Federal Advisory Committee to help recommend procedures for sighting wind energy on federal land and to generate national guidelines.

Mr. Rayhill said that he has been in the wind energy business for eight years. At the first American Wind Energy Association Conference that he attended, there were 900 people there. Two weeks ago at the wind conference, there were 13,000 people. He is excited about the enthusiasm being shown regarding wind energy.

As Idaho moves forward with wind energy, there will be development. Based on what **Mr. Rayhill** has observed, Oregon has a nice mix of both policy and financial tools. The financial tools do not create a market, whereas the state-driven policy can create a market. He said that what his company is seeing right now is that there is a lot of contact from folks outside the state. They want our wind. We have good resources, it is permanent, and is up and ready to go and near transmission. It is good for the local economy because there will be development, and good

for the local counties because they will get the property tax benefits. The landowners will get royalties. All of that money will stay in the state. However, it is bad in a certain way for ratepayers because that will be the cheapest wind you can have. **Mr. Rayhill** said that wind could have been built in 2003 for between three and four cents, in 2004 at about four cents, 2005 at five cents, 2006 at six cents, and every year it gets more expensive. The longer we wait, the more expensive it will be.

Oregon has a renewable energy action plan. Their Governor has been promoting it for some time and it has paid off great dividends. Last year, they were number two for new generation.

Wall Street is saying - let's get to generation. Environmental communities that used to oppose wind farms are saying - let's do 25 times what we are doing right now and do it by 2030. Over the next 22 years, there could be a lot of opportunities. In the United States, there are over 18,000 megawatts. If Idaho captures one percent, that will be 4,200 megawatts of new wind generation by 2030. We are 13th in the nation, so we could be well ahead of one percent. **Mr. Rayhill** said that as soon as they have a power purchase agreement, the banks tell them that they will back them. On March 11, **Governor Otter** and **Pocatello Mayor Chase** announced that Nordic Wind Power will locate its first North American manufacturing facility in Pocatello. It will provide 160 jobs. When you think about the kind of development that can happen in wind power, in Idaho alone, there is a great opportunity for manufacturing. Pocatello has rail, interstate traffic north, south, east and west and can get to any market in the area.

Representative Stevenson inquired as to how many wind turbines had been put up south of Mountain Home. **Mr. Rayhill** said there were forty-one, for a total of 82 megawatts. **Representative Stevenson** asked as to how reliable are the wind turbines to meet the base-load. **Mr. Rayhill** responded by saying there are three studies being done. For example, if there are 82 megawatts, you can get between 20 and 40 megawatts of base-load power out of that plant when it is spread in its geographic distribution. They are doing it with forecasting and what they call a "smart grid." He said that the wind is not intermittent, but is variable, as it is blowing somewhere. They use that to tie these different plants together into the system and deliver a base-load product from wind.

Senator Werk said that he understands that **Mr. Rayhill** has suggested that Idaho adopt a renewable energy portfolio as a driver to get renewables up and running. **Mr. Rayhill** said that was correct. He stated that one can't argue with results. Idaho doesn't like mandates; however, Montana and Nevada are as conservative as we are and they have renewable portfolio standards. Utah is working towards a renewable energy standard right now. The state of Colorado, which is very independent-minded, passed their renewable energy standards by a ballot initiative.

Chairman Eskridge asked what the price was per kilowatt hour for wind energy. **Mr. Rayhill** said that it is six to eight cents, depending on the resource.

Chairman Eskridge then asked **Mr. Rayhill** if they had any projects for state endowment lands. **Mr. Rayhill** said they do. The one that he is working on now is in Bingham County, with about 3,000 acres of state endowment land. He said that is why he put the State Department of Lands in contact with Wyoming, Washington, Oregon, and the BLM in New Mexico to get them contracts for use on wind energy on state lands. He said that they are still working through it. **Chairman Eskridge** inquired as to the value to the state to have a tower on state endowment lands. **Mr. Rayhill** said the lease that they proposed was that they share as any other landowner, and that guarantees the state market-rate, which right now is between two and three percent of the gross. **Chairman Eskridge** then asked for a ballpark figure of the revenue that would be coming to the state from that project. **Mr. Rayhill** said that using a 30 percent capacity factor, a two megawatt machine, and getting seven cents a kilowatt – on an average year, then you could expect between $6,000 to $15,000 per year, per machine. **Chairman Eskridge** then asked if this is a marketing tool that the state could be using to develop wind in Idaho and is it an asset? **Mr. Rayhill** said he believed so.

Representative Stevenson asked if the contracts that are being brought in are under the PURPA contracts? **Mr. Rayhill** said that none of their projects are PURPA contracts. They are all negotiated contracts with utilities.

Mr. David Hawk asked **Mr. Rayhill** whether the state lands have an intensive value of less hassle than private lands, or BLM and Forest Service lands; if so, then it seems to him that considering the oil and gas industry where the least the state would get is one-eighth of the minerals for royalties, he asked whether the royalties from the wind towers shouldn't be in excess of the two to three percent he referred to earlier because of the intensive value? **Mr. Rayhill** said it is a question of economics and they will pay what the going rate is. The policy of his company is to negotiate a fair deal.

Mr. Gene Fadness inquired if there is still a backlog in turbine availability and is that driving up the price for wind? **Mr. Rayhill** said there is a backlog, but did not indicate about the pricing.

Chairman Eskridge thanked everyone for their participation in the meeting.

Written testimony was submitted by **Ken Miller**, Clean Energy Program Director for Snake River Alliance, (Handout #5). Included with his testimony was "The Economic Promise of Idaho's Renewable Energy" and a letter from Andrea Shipley, Executive Director of Snake River Alliance.

Handout #6 was a copy of an article by Mark P. Mills regarding oil prices, submitted by Russ Westerberg.

Handout #7 included copies (that have been received to date) of the energy survey of schools.

The committee will next meet on September 17, 2008 from 9:30 a.m. to 5:00 p.m. and on September 28, 2008 from 8:00 a.m to noon. **The Chairman** asked **Mr. Nugent** to contact the other committee members regarding the meeting.

Chairman Eskridge said that on the "to do" list, **Mike Nugent** will draft a memorial to Congress and **Senator Werk** will prepare some proposed legislation in terms of incentives on the school building issue. With no further business to come before the committee, **Chairman Eskridge** adjourned the meeting at 3:45 p.m.

NOTE: All handouts are on file in the Legislative Services Office.